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THE SIGNIFICANCE OF EMPLOYMENT PATTERNS IN HOUSEHOLDS FOR LABOR MARKET ANALYSIS

by

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THE SIGNIFICANCE OF EMPLOYMENT PATTERNS IN HOUSEHOLDS FOR LABOR MARKET ANALYSIS

Employment and unemployment are distributed among workers in such a way that definite household or family employment patterns are found in households with two or more worker-members. The outstanding characteristic of these patterns is a greater concentration of households with all workers employed full-time or with all workers unemployed than would be found if the employed and unemployed worker-members were distributed among the households according to chance. Furthermore, when single- and multi-worker households are compared, there is a consistent difference between them in the rates of unemployment of their worker-members, the workers in multi-worker households being unemployed in relatively greater numbers. Woytinsky attributes the concentration of unemployment in multi-worker households or families to the entrance into the labor market of so-called "additional" workers, those who are not usually in the labor force, but who enter solely because of the unemployment of other wage-earners.[1] Humphrey attributes the difference between the rates of unemployment for single- and multi-worker families to the employment characteristics of the usual supplementary workers in multi-worker families and to the hiring policy of employers.[2]

Each of these explanations takes the fundamental factors of the other into account, but the relative weights attributed to them and, more

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[1] Woytinsky, Additional Workers and the Volume of Unemployment, Pamphlet Series #1, Committee on Social Security of the Social Science Research Council, and Three Aspects of Labor Dynamics, Committee on Social Security of the Social Science Research Council, 1942, ch. 10, 12, 15.

[2] Humphrey, "Alleged Additional Workers in the Measurement of Unemployment," Journal of Political Economy, June 1940, p. 413-14.

important, the basic assumptions with regard to the incidence of unemployment in households, on the basis of which the explanations are derived, differ. Woytinsky assumes that the distribution of employment and unemployment in families or households is not random because of the entrance of "additional" workers to the labor market in periods of depression and a consequent change in the worker-composition of households. Humphrey assumes that the incidence of unemployment in households is never random because of the characteristics of secondary workers who constitute the largest proportion of workers in multi-worker households.

The dynamics of labor supply changes can not be fully understood until there are more continuous statistical data available on the net effects of changes in the demographic structure of the labor supply in relation to variations in its size over a period of time. Any discussion based on a measurement of the ratio of "usual" to "additional" workers in the labor supply, as developed by Woytinsky, for example, must be largely a matter of conjecture at present. Data are available, however, to test further the explanation of patterns of employment and unemployment in households at any one time.

The suggestion that the reasons for the concentration of unemployment in multi-worker households is the result of the characteristics of the secondary workers in such households or of an abnormal proportion of such workers does not take account of the employment characteristics of the household as a unit. Perhaps the significant factor in the situation has therefore not been considered. If, for example, there is a higher rate of unemployment for Negro than for white workers, it follows that this will have a significant effect on the unemployment rates for Negro as compares with white households or families, and that this will be especially important in labor

markets with a high proportion of Negro workers. This study was undertaken to examine the employment characteristics of workers in households with differing employment patterns, treating households as units. The results of the analysis are suggestive rather than conclusive, but a clarification of the questions raised here seems important as spade-work for further research in the problem.

Data Used in This Analysis[3]

The emphasis of the analysis has been placed on the relationship of the sex, race, age, and usual industry of workers in the household to the employment pattern of the household. Households were divided into three major groups for analysis of employment patterns: those with all workers employed full-time, those with combinations of work status, and those with all workers unemployed. Major emphasis has been placed on the experience of multi-worker households, because it is in these households that the uneven distribution of employment opportunity is most significantly reflected. The data were obtained from sample studies made in three cities: Philadelphia, Pa., Manchester, N. H., and Millville, N. J., in the spring and fall of 1936.[4]

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[3] I am indebted to Mr. David Weintraub, Director of the National Research Project of the Work Projects Administration, for access to the schedules analyzed in this study. The clerical work involved was made possible by a Grant-in-Aid from the Rockefeller Foundation. For assistance in tabulating and analyzing the data I am indebted to Mr. Samuel Cohn, Research Assistant, and to Mrs. Helen Blee and Misses Charlotte Evans and Elizabeth Geary, of the clerical staff of the Industrial Research Department staff.

[4] The Philadelphia sample of households was enumerated from April 15 to May 15, 1936. The study included 44,817 households, roughly a tenth of the city's families. The sample blocks were selected in 1931 by the Industrial Research Department of the University of Pennsylvania in cooperation with the Bureau of Compulsory Education of the Public Schools of Philadelphia, using School Census data. The School Blocks selected for enumeration were representative of the city's population in terms of size of household and race according to the 1930 Census of Population, and representative of income levels, according to an independent income survey. (Continued on page 4.)

The same schedule definitions of "household," "household head," "workers," "employment," and "unemployment" were used in three cities.[5]

About half of the total number of households in all three cities had two or more worker-members. This proportion is higher than the average for the country. Although the family structure of the labor supply was similar in the three cities, the types of industries represented and the general volume of unemployment in 1936 differed materially. Millville is a small diversified manufacturing center situated in a rural section of New Jersey which suffered less severely than the other cities during the depression. Philadelphia is a metropolitan center of diversified manufacturing interests but with some declining industries and population changes which produced a relatively high rate of unemployment during the decade of the thirties. Manchester is a specialized manufacturing center which had been seriously

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[4](Continued from page 3) The Millville sample was a random sample of 582 households which included every fifth household within the city environs. These were enumerated from August 24 to September 6, 1936.
The Manchester sample of 1,000 households included every seventh household within the city's environs except for the exclusion of one suburban residence district. The enumeration dates were September 9 to October 16, 1936.

[5]The household was defined as a "group of persons living together as one housekeeping unit who may or may not be related by ties of kinship." The person designated as the household head of such units was the "usual chief wage-earner." Both the household and the household head, as defined here, are primarily economic rather than legal or bio-legal concepts, but the findings are not materially affected if unrelated members of households are excluded from consideration.
All persons were counted as "workers" if they were 16 years of age and over, and had jobs or were "able and willing to work" on the date of enumeration. The definition of workers was a broad one which included supplementary as well as usual wage-earners. From other evidence available, it is clear that the count of such persons included some "additional workers" or "forced" entrants to the labor market; that is to say, those whose activity in seeking work was engendered by the unemployment of other persons, although no attempt was made in collecting the data to differentiate these from other persons who were "able and willing to work." Persons reported as Emergency workers were classified as unemployed and persons working 30 hours or more a week were counted as employed full-time in the analysis for all three cities.

Table 1.
NUMBER OF HOUSEHOLDS, NUMBER OF WORKERS, AND NUMBER OF UNEMPLOYED BY NUMBER OF WORKERS PER HOUSEHOLD

Number of workers per household	Number of households						Number of workers and of unemployed											
							Philadelphia				Manchester				Millville			
	Philadelphia		Manchester		Millville		Workers		Unemployed		Workers		Unemployed		Workers		Unemployed	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Total	44,817	100.0	1,000	100.0	582	100.0	79,822	100.0	24,067	30.1	1,779	100.0	636	35.8	1,004	100.0	175	17.4
0	2,329	5.2	85	8.5	30	5.2												
1	20,604	46.0	421	42.1	255	43.8	20,604	100.0	4,879	23.7	421	100.0	107	25.4	255	100.0	34	13.3
2	12,287	27.4	261	26.1	193	33.2	24,574	100.0	7,334	29.8	522	100.0	212	40.6	386	100.0	71	18.4
3	5,705	12.7	136	13.6	70	12.0	17,115	100.0	5,516	32.2	408	100.0	155	28.2	210	100.0	39	18.6
4	2,521	5.6	66	6.6	21	3.6	10,084	100.0	3,578	35.5	264	100.0	92	34.8	84	100.0	19	22.6
5	926	2.1	23	2.3	9	1.5	4,630	100.0	1,724	37.2	115	100.0	53	46.1	45	100.0	8	17.8
6	330	0.8	7	0.7	4	0.7	1,980	100.0	710	35.9	42	100.0	16	38.1	24	100.0	4	16.7
7 and over	115	0.2	1	0.1			835	100.0	326	39.0	7	100.0	1	14.3				

affected by the complete shut-down of its major industry in 1935, approximately a year before the data used in this study were collected. In 1936, the rate of unemployment was 35.8 per cent in Manchester, 30.1 per cent[6] in Philadelphia, and 17.4 per cent in Millville.

In all three cities, the rate of unemployment for workers in multi-worker households was higher than that for all workers and especially for workers in single-worker households. The differential was greatest, however, in Manchester, the city with the highest rate of general unemployment, and smallest in Millville, the city with the lowest rate of general unemployment.

[6] For purposes of this analysis, persons not seeking work because of temporary illness were excluded from the count of the unemployed in Philadelphia to facilitate comparisons with the other cities.

Table 2a

EMPLOYMENT STATUS OF OTHER HOUSEHOLD MEMBERS 16 YEARS OF AGE AND OLDER BY EMPLOYMENT PATTERN OF HOUSEHOLD AND EMPLOYMENT STATUS OF HOUSEHOLD HEAD[a]

PHILADELPHIA

Employment pattern of household and employment status of head	Household heads	Employment status of other members									
		Total		Non-workers		Workers					
						Total		Employed [b]		Unemployed	
		Number	Per cent	Number	Per cent	Number	Per-cent	Number	Per cent	Number	Per cent
All households	21,884	58,869	100.0	20,833	35.4	38,036	64.6	23,475	39.9	14,561	24.7
Head employed full-time	14,798	40,307	100.0	15,027	37.3	25,280	62.7	17,113	42.5	8,167	20.2
Head employed part-time	1,756	4,628	100.0	1,567	33.9	3,061	66.1	1,776	38.4	1,285	27.7
Head unemployed	4,628	11,565	100.0	3,719	32.2	7,846	67.8	3,422	29.6	4,424	38.2
Head not seeking work	702	2,369	100.0	520	22.0	1,849	78.0	1,164	49.1	685	28.9
Complete full-time employment	7,423	17,951	100.0	7,359	41.0	10,592	59.0	10,592	59.0		
Head employed full-time	7,198	17,259	100.0	7,197	41.7	10,062	58.3	10,062	58.3		
Head not seeking work	225	692	100.0	162	23.4	530	76.6	530	76.6		
Combination of status	12,103	35,799	100.0	11,757	32.8	24,042	67.2	12,883	36.0	11,159	31.2
Head employed full-time	7,600	23,048	100.0	7,830	34.0	15,218	66.0	7,051	30.6	8,167	35.4
Head employed part-time	1,756	4,628	100.0	1,567	33.9	3,061	66.1	1,776	38.4	1,285	27.7
Head unemployed	2,405	6,854	100.0	2,086	30.4	4,768	69.6	3,422	49.9	1,346	19.7
Head not seeking work	342	1,269	100.0	274	21.6	995	78.4	634	50.0	361	28.4
Complete unemployment	2,358	5,119	100.0	1,717	33.5	3,402	66.5			3,402	66.5
Head unemployed	2,223	4,711	100.0	1,633	34.7	3,078	65.3			3,078	65.3
Head not seeking work	135	408	100.0	84	20.6	324	79.4			324	79.4

[a] In this and the following tables only multi-worker households are included, and households with all workers employed part-time are included in the group "Combinations of status."

[b] Includes workers employed part-time.

When the households are ranked in order of increasing numbers of workers per household, the differential rates of unemployment do not rise consistently with each addition of one worker to the number of workers per household. Nevertheless, in all instances except one, (a household of seven workers in Manchester) the workers in multi-worker households have a higher rate of unemployment than those in single-worker households. (Table 1.)

Although the proportion of secondary workers 16 years of age and

Table 2b

EMPLOYMENT STATUS OF OTHER HOUSEHOLD MEMBERS 16 YEARS OF AGE AND OLDER
BY EMPLOYMENT PATTERN OF HOUSEHOLD AND EMPLOYMENT STATUS OF HOUSEHOLD HEAD
MANCHESTER

Employment pattern of household and employment status of head	Household heads	Employment status of other members									
		Total		Non-workers		Workers					
						Total		Employed[a]		Unemployed	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
All households	494	1,355	100.0	485	35.8	870	64.2	488	36.0	382	28.2
Head employed full-time	319	907	100.0	349	38.5	558	61.5	372	41.0	186	20.5
Head employed part-time	22	59	100.0	19	32.2	40	67.8	24	40.7	16	27.1
Head unemployed	147	371	100.0	114	30.7	257	69.3	86	23.2	171	46.1
Head not seeking work	6	18	100.0	3	16.7	15	83.3	6	33.3	9	50.0
Complete full-time employment	148	397	100.0	167	42.1	230	57.9	230	57.9		
Head employed full-time	147	395	100.0	167	42.3	228	57.7	228	57.7		
Head not seeking work	1	2	100.0			2	100.0	2	100.0		
Combinations of status	258	763	100.0	253	33.2	510	66.8	258	33.8	252	33.0
Head employed full-time	172	512	100.0	182	35.5	330	64.5	144	28.1	186	36.4
Head employed part-time	22	59	100.0	19	32.2	40	67.8	24	40.7	16	27.1
Head unemployed	62	184	100.0	51	27.7	133	72.3	86	46.7	47	25.6
Head not seeking work	2	8	100.0	1	12.5	7	87.5	4	50.0	3	37.5
Complete unemployment	88	195	100.0	65	33.3	130	66.7			130	66.7
Head unemployed	85	187	100.0	63	33.7	124	66.3			124	66.3
Head not seeking work	3	8	100.0	2	25.0	6	75.0			6	75.0

[a]Includes workers employed part-time.

over who were in the labor force did not vary materially between the three cities, the average number of these workers per household did. Considering multi-worker households only, the average was 1.7 secondary workers per household in Philadelphia, 1.8 in Manchester, and 1.5 in Millville. The proportion of secondary workers to non-workers 16 years of age and over in multi-worker households was higher in households with complete unemployment and with combinations of work status than in households with all workers employed full-time. (Table 2a, b, c.) Although this was true in all three cities, it

Table 2c

EMPLOYMENT STATUS OF OTHER HOUSEHOLD MEMBERS 16 YEARS OF AGE AND OLDER
BY EMPLOYMENT PATTERN OF HOUSEHOLD AND EMPLOYMENT STATUS OF HOUSEHOLD HEAD
MILLVILLE

Employment pattern of household and employment status of head	Household heads	Employment status of other members									
		Total		Non-workers		Workers					
						Total		Employed[a]		Unemployed	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
All households	297	728	100.0	269	37.0	459	63.0	354	48.6	105	14.4
Head employed full-time	224	553	100.0	208	37.6	345	62.4	271	49.0	74	13.4
Head employed part-time	30	70	100.0	25	35.7	45	64.3	36	51.4	9	12.9
Head unemployed	36	82	100.0	31	37.8	51	62.2	33	40.2	18	22.0
Head not seeking work	7	23	100.0	5	21.7	18	78.3	14	60.9	4	17.4
Complete full-time employment	139	331	100.0	130	39.3	201	60.7	201	60.7		
Head employed full-time	137	326	100.0	129	39.6	197	60.4	197	60.4		
Head not seeking work	2	5	100.0	1	20.0	4	80.0	4	80.0		
Combinations of status	147	374	100.0	131	35.0	243	65.0	153	40.9	90	24.1
Head employed full-time	87	227	100.0	79	34.8	148	65.2	74	32.6	74	32.6
Head employed part-time	30	70	100.0	25	35.7	45	64.3	36	51.4	9	12.9
Head unemployed	25	59	100.0	23	39.0	36	61.0	33	55.9	3	5.1
Head not seeking work	5	18	100.0	4	22.2	14	77.8	10	55.6	4	22.2
Complete unemployment	11	23	100.0	8	34.8	15	65.2			15	65.2
Head unemployed Head not seeking work	11	23	100.0	8	34.8	15	65.2			15	65.2

[a]Includes workers employed part-time.

cannot be assumed that the presence of "additional" workers is the primary reason for the difference. A higher proportion of secondary workers to non-workers 16 years of age and over was, in general, associated with those households in which the head was not seeking work, unemployed, or employed part-time, rather than those in which the head was employed full-time. Nevertheless, the average number of secondary workers per household was the same in Philadelphia and Manchester, whether the head was employed or unemployed, and in Millville, a household with an unemployed head had fewer secondary

workers, on the average, than one in which the head was employed part- or full-time.

In all three cities, the average number of secondary workers per household was higher in households in which some workers had jobs and others were unemployed than in households in which all workers were employed full-time or all were unemployed. In Philadelphia and Millville, the average was the same in households with all workers employed full-time or all workers unemployed. In Manchester, on the other hand, the average was higher for households with all workers employed full-time than for households with all workers unemployed.

The households with combinations of work status accounted for a half or more than half of all multi-worker households and a slightly higher proportion of all workers in all three cities. Households with all workers employed full-time accounted for 46.8 per cent of all multi-worker households in Millville, 33.9 per cent in Philadelphia and 30.0 per cent in Manchester. The rate of complete unemployment in households, on the other hand, was highest in Manchester (17.8 per cent) and lowest in Millville (3.7 per cent). In all three cities, there were a greater number of households with complete full-time employment and a greater number with complete unemployment than a chance distribution of the employed and unemployed workers would lead one to expect.

Differences between Workers in Single- and Multi-Worker Households

Before discussing the relation of what may be called, for want of a better term, the employment characteristics of households to their employment patterns, attention should be drawn to the general differences in the characteristics of workers in multi- and single-worker households, as groups. By

definition, a multi-worker household has more secondary workers than a single-worker household. Secondary workers constituted four-fifths of all workers in multi-worker households in each city. It follows from this that the average age of all workers was lower in multi-worker than in single-worker households, and that the proportion of women workers was higher. These differences are characteristic of all three cities. In Philadelphia, the city of widest diversification of industry, the customary attachments to industry of workers in single- and in multi-worker households were distributed in approximately the same categories. In Millville and Manchester, however, the proportion of workers from multi-worker households in manufacturing was much greater and the proportion in the service industries and domestic service was much lower than for workers from single- worker households.

The workers in single-worker households are predominantly males in the most employable age-groups and the workers in multi-worker households are predominantly secondary workers with a much wider range of employment characteristics. The rates of unemployment for workers in these two groups, therefore, may be expected to differ. This, essentially, is Humphrey's explanation for the incidence of unemployment in multi-worker households. Other factors, however, must also be examined in this connection.

Household Employment Characteristics and the Incidence of Unemployment in Households

The sex, race, and age composition of a given group of households, as units, would not be expected to conform to a random distribution of the same characteristics of all the workers in these households. It is determined, rather, by the social characteristics of family life. The rates of unemployment for workers in different sex, race, and age categories are known to vary considerably, but because of the social structure of household units

Table 3

SEX OF HOUSEHOLD HEADS AND OF SECONDARY WORKERS
BY EMPLOYMENT PATTERN OF HOUSEHOLD

Employment pattern of household	Household heads[a]						Secondary workers					
	Total		Men		Women		Total		Men		Women	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Philadelphia	21,884	100.0	18,919	100.0	2,965	100.0	38,036	100.0	18,431	100.0	19,605	100.0
Complete full-time employment	7,423	33.9	6,509	34.4	914	30.8	10,592	27.9	4,770	25.9	5,822	29.7
Combinations of status	12,103	55.3	10,457	55.3	1,646	55.5	24,042	63.2	12,003	65.1	12,039	61.4
Complete unemployment	2,358	10.8	1,953	10.3	405	13.7	3,402	8.9	1,658	9.0	1,744	8.9
Manchester	494	100.0	443	100.0	51	100.0	868[b]	100.0	365	100.0	503	100.0
Complete full-time employment	148	30.0	132	29.8	16	31.4	230	26.5	98	26.8	132	26.2
Combinations of status	258	52.2	231	52.1	27	52.9	509	58.6	219	60.0	290	57.7
Complete unemployment	88	17.8	80	18.1	8	15.7	129	14.9	48	13.2	81	16.1
Millville	297	100.0	260	100.0	37	100.0	459	100.0	228	100.0	231	100.0
Complete full-time employment	139	46.8	127	48.9	12	32.4	201	43.8	98	43.0	103	44.6
Combinations of status	147	49.5	122	46.9	25	67.6	243	52.9	124	54.4	119	51.5
Complete unemployment	11	3.7	11	4.2			15	3.3	6	2.6	9	3.9

[a]Includes heads of multi-worker households who were not seeking work.

[b]Excludes 2 secondary workers who did not report sex or relationship to head.

these varying rates cannot be applied uniformly to all households. For this reason, the employment characteristics of the households themselves must be determined and studied.

If the relationship of the employment patterns of multi-worker households to the sex of the household head and of the secondary workers is examined, one finds little evidence of association. (Tables 3 and 4.) In Philadelphia, a slightly higher rate of complete unemployment in households is found where the household head is a woman but this is not the case in the other two cities. This may be attributable to a relatively high proportion of Negroes among the women heads of multi-worker households in Philadelphia. Nor is there any clear-cut association of complete full-time employment or complete unemployment in households by reason of the sex distribution of the

Table 4

SEX AND RELATIONSHIP TO HEAD OF SECONDARY WORKERS
BY EMPLOYMENT PATTERN OF HOUSEHOLD

Employment pattern of household	Sex and relationship to head of secondary workers																			
	Total		Men								Women									
			Total		Son		Other male relatives		Other men[a]		Total		Wife		Daughter		Other female relatives		Other women[b]	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Philadelphia	38,036	100.0	18,431	48.4	10,095	26.5	5,871	15.4	2,465	6.5	19,605	51.6	5,354	14.1	8,404	22.1	4,375	11.5	1,472	3.9
Complete full-time employment	10,592	100.0	4,770	45.0	2,424	22.9	1,674	15.8	672	6.3	5,822	55.0	1,752	16.5	2,038	19.3	1,365	12.9	667	6.3
Combinations of status	24,042	100.0	12,003	49.9	6,775	28.2	3,676	15.3	1,552	6.4	12,039	50.1	2,936	12.2	5,730	23.8	2,639	11.0	734	3.1
Complete unemployment	3,402	100.0	1,658	48.7	896	26.3	521	15.3	241	7.1	1,744	51.3	666	19.6	636	18.7	371	10.9	71	2.1
Manchester	868	100.0	365	42.1	264	30.4	59	6.8	42	4.9	503	57.9	166	19.1	231	26.6	74	8.5	32	3.7
Complete full-time employment	230	100.0	98	42.6	67	29.1	17	7.4	14	6.1	132	57.4	43	18.7	56	24.4	24	10.4	9	3.9
Combinations of status	509	100.0	219	43.0	164	32.2	35	6.9	20	3.9	290	57.0	81	15.9	152	29.9	40	7.9	17	3.3
Complete unemployment	129	100.0	48	37.2	33	25.6	7	5.4	8	6.2	81	62.8	42	32.5	23	17.8	10	7.8	6	4.7
Millville	459	100.0	228	49.7	140	30.5	32	7.0	56	12.2	231	50.3	86	18.7	86	18.7	29	6.3	30	6.6
Complete full-time employment	201	100.0	98	48.8	62	30.9	10	5.0	26	12.9	103	51.2	45	22.4	31	15.4	9	4.5	18	8.9
Combinations of status	243	100.0	124	51.0	73	30.0	22	9.1	29	11.9	119	49.0	36	14.8	51	21.0	20	8.3	12	4.9
Complete unemployment	15	100.0	6	40.0	5	33.3			1	6.7	9	60.0	5	33.3	4	26.7				

[a]Includes heads of secondary (unrelated) families, boarders or lodgers, and resident servants.

[b]Includes resident servants and boarders or lodgers.

[c]Excludes 2 secondary workers who did not report sex or relationship to head.

secondary workers in the household, although the rate of general unemployment was higher for women than for men in all three cities in 1936. In Philadelphia, for example, a higher proportion of women among the secondary workers in households is associated with complete full-time employment in the household, but in Manchester and Millville this is associated with complete unemployment in the household.

It may be noted that the proportion of the secondary workers who are wives of household heads differs in the three cities (Table 4), and that this disparity reflects differences in social attitudes with regard to labor market participation by married women as well as the opportunities of employment for women. Some support for Woytinsky's hypothesis with regard to household employment patterns is found in the fact that wives constitute a uniformly higher proportion in households with complete unemployment than in other households, but they do not account for all cases of complete unemployment in households and not all working wives can be classified as "additional" workers.

Although sons and daughters predominate among secondary workers, in households with two workers the wife is the second worker in more households than is the son or daughter. In households with three or more workers, however, sons or daughters are the secondary worker in most cases, the wife only occasionally serving in this capacity. In Manchester, the relative number of households with all male workers decreased as unemployment increased in the household; the relative number of households with all female workers, on the other hand, increased as unemployment in the household increased. This was not true for Millville, however, and insufficient data are available to make the comparison for Philadelphia.

Table 5
MEDIAN AGE OF HOUSEHOLD HEADS AND OF SECONDARY WORKERS
BY EMPLOYMENT PATTERN OF HOUSEHOLD

Employment pattern of household	Philadelphia		Manchester		Millville	
	Number reporting[aa]	Median age	Number reporting[a]	Median age	Number reporting	Median age
Complete full-time employment	17,677	33.9	378	34.8	340	34.3
Head[b]	7,318	45.6	148	48.0	139	47.4
Secondary workers	10,359	27.5	230	27.9	201	27.8
Combinations of status	35,777	30.5	767	31.3	390	35.4
Head[b]	12,010	46.4	258	48.6	147	48.1
Secondary workers	23,767	24.8	509	24.3	243	27.4
Complete unemployment	5,705	32.1	217	37.7	26	39.4
Head[b]	2,341	42.1	88	47.4	11	50.0
Secondary workers	3,364	24.0	129	29.8	15	30.0

[a]Excludes the following number of persons who did not report age: Philadelphia, 215 heads and 546 secondary workers; Manchester, 2 secondary workers.

[b]Includes heads of multi-worker households who were not seeking work.

Race is an important employment characteristic of workers in only one of the three cities studied, namely Philadelphia. Here, it appears to be an important factor in household employment patterns as well. Although the rate of complete unemployment in households was 10.8 per cent for all multi-worker households in the sample, the rate for Negro multi-worker households was more than twice as large (24.4 per cent). It may be noted that it was larger for Negro households with female heads than for those with male heads.

The average age of all workers in multi-worker households in the three cities ranged from 31.9 in Philadelphia to 33.3 in Manchester and 34.9 in Millville. Although advancing age is an important factor in the unemployment of individuals, particularly of experienced workers, the age composition of households does not bear the same relationship to the employment pattern of the household, except in Millville (Table 5). Here, an increase in the aver-

age age for all workers in the household is directly associated with increasing unemployment in the household. In Philadelphia, on the other hand, a higher age for the household head and for the secondary workers, considered in combination or separately, is associated with more rather than with less employment in the household.

In all three cities, the rate of unemployment was the lowest for workers in the age-group, 25 to 44. These workers, however, were not uniformly distributed among the multi-worker households. There were relatively more multi-worker households in which all the worker-members were found in this age-group and in which none were found than chance would indicate. But the relationship of this concentration in the most employable age-group, or its absence, to the employment pattern of the household was not consistent in the two cities in which a test was made. The small size of two of the samples and the limitation of number of situations studied probably accounts for the inconclusiveness of the results with regard to the relation of the age composition of households to their employment patterns.

There are two questions of interest to this analysis regarding the effect of customary industrial attachments on the incidence of household unemployment. One is whether the workers in any major industry group tend to be concentrated in households where all members are unemployed, and the other, whether the attachment of secondary workers to the same industry as that of the head affects the employment patterns of households, as units.[7]

When multi-worker households are grouped by their employment patterns, a relatively high rate of household unemployment is found for workers

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[7]Because of the burdensome clerical work involved, this analysis has been made only for nine broad industry groups. In the case of Manchester manufacturing industries, work in the same industry group usually means work in the same plant. This is less frequently the case in Millville and Philadelphia.

Table 6

USUAL INDUSTRY GROUP OF ALL WORKERS
BY EMPLOYMENT PATTERN OF HOUSEHOLD

Usual industry group	Total		Complete full-time employment		Combinations of status		Complete unemployment	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Philadelphia[a]								
Total[b]	55,085	100.0	17,709	32.1	31,784	57.7	5,592	10.2
Manufacturing	20,803	100.0	6,085	29.3	12,866	61.8	1,852	8.9
Building and construction	4,632	100.0	1,088	23.5	2,266	48.9	1,278	27.6
Trade	9,734	100.0	3,707	38.1	5,374	55.2	653	6.7
Public utilities	4,135	100.0	1,602	38.7	2,076	50.2	457	11.1
Government agencies	3,050	100.0	1,336	43.8	1,566	51.3	148	4.9
Insurance, finance, business and professional offices	2,576	100.0	1,237	48.0	1,232	47.8	107	4.2
Institutions	1,125	100.0	404	35.9	660	58.7	61	5.4
Service industries	4,363	100.0	1,484	34.0	2,537	58.2	342	7.8
Miscellaneous	4,667	100.0	766	16.4	3,207	68.7	694	14.9
Manchester								
Total[b]	1,228	100.0	377	30.7	668	54.4	183	14.9
Manufacturing	678	100.0	156	23.0	373	55.0	149	22.0
Building and construction	46	100.0	20	43.5	18	39.1	8	17.4
Trade	182	100.0	78	42.9	94	51.6	10	5.5
Public utilities	44	100.0	19	43.2	25	56.8		
Government agencies	45	100.0	22	48.9	22	48.9	1	2.2
Insurance, finance, business and professional offices	45	100.0	15	33.3	26	57.8	4	8.9
Institutions	11	100.0	4	36.4	6	54.5	1	9.1
Service industries	47	100.0	22	46.8	24	51.1	1	2.1
Miscellaneous	130	100.0	41	31.5	80	61.6	9	6.9
Millville								
Total[b]	709	100.0	337	47.5	350	49.4	22	3.1
Manufacturing	439	100.0	211	48.1	217	49.4	11	2.5
Building and construction	28	100.0	10	35.7	16	57.2	2	7.1
Trade	73	100.0	41	56.2	30	41.1	2	2.7
Public utilities	25	100.0	12	48.0	11	44.0	2	8.0
Government agencies	24	100.0	14	58.3	10	41.7		
Insurance, finance, business and professional offices	7	100.0	2	28.6	5	71.4		
Institutions	2	100.0	1	50.0	1	50.0		
Service Industries	10	100.0	4	40.0	6	60.0		
Miscellaneous	101	100.0	42	41.6	54	53.5	5	4.9

[a]Includes heads of multi-worker households who were not seeking work. These persons were excluded in the data for Manchester and Millville.

[b]Excludes the following number of persons who were new workers or for whom usual industry was not reported: 4,835 in Philadelphia, 130 in Manchester, and 40 in Millville.

Table 7

PERCENTAGE OF SECONDARY WORKERS ATTACHED TO SAME USUAL INDUSTRY GROUP AS THE HOUSEHOLD HEAD BY EMPLOYMENT PATTERN OF HOUSEHOLD

Employment pattern of household	Number of secondary workers											
	Philadelphia				Manchester				Millville			
	Total		In same industry group as head		Total		In same industry group as head		Total		In same industry group as head	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Total[a]	33,497	100.0	11,024	32.9	863	100.0	336	38.9	449	100.0	198	44.1
Complete full-time employment	10,370	100.0	3,760	36.3	228	100.0	88	38.6	195	100.0	113	57.9
Combinations of status	19,842	100.0	6,467	32.6	507	100.0	176	34.7	239	100.0	80	33.5
Complete unemployment	3,285	100.0	797	24.3	128	100.0	72	56.3	15	100.0	5	33.3

[a]Excludes the following number of workers who did not report usual industry or who were in households in which no usual industry was reported for the head: Philadelphia, 4,539; Manchester, 7; Millville, 10.

from the building and construction industry group in all three cities. (Table 6) This is true also for workers from public utilities in Philadelphia and Millville, and for workers from miscellaneous industries, a large proportion of whom are Negro domestic servants, in Philadelphia. In Manchester, as might be expected from the factory shut-down preceding this study, a very high rate of household unemployment is reported for workers from the manufacturing industries, specifically textile manufacturing. In general, these patterns of household unemployment reflect the incidence of worker-unemployment in the industries of each city.

It may be noted that the proportion of secondary workers usually engaged in the same industry group as the household head rises from 32.9 per cent in Philadelphia to 38.9 per cent in Manchester and 44.1 per cent in Millville. (Table 7.) This disparity reflects differences in social custom with regard to such employment, as well as the individual's opportunity to work elsewhere than in the industry where other members of his family are usually engaged. The Millville experience indicates that a high degree of

customary employment in the same industry is not necessarily conditioned by the specialization or diversification of employment opportunity in the labor market. It is probable, however, that if this study had been made prior to the Amoskeag shut-down in Manchester, this city would have shown a much higher proportion of secondary workers in the same usual industry as the household head.[8]

Although it was expected that the sex, race, and age composition of households would not reflect a random distribution, there is no á priori reason for expecting the usual industry of workers in households not to reflect a random distribution. But in Manchester and Millville, cities of specialized and diversified industrial opportunity, respectively, there were more households in which all workers were customarily attached to the same industry and fewer households in which all workers were customarily attached to different industries than one would be led to expect from a chance distribution.[9]

It is clear, therefore, that patterns of employment in households

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[8] One factor of importance in understanding the effects of a large volume of unemployment is not generally recognized in the literature on labor supply and unemployment. This is that in specialized industry centers a permanent shut-down frequently reduces the size of the labor supply because women who have formerly worked in the major industry of the town can find no other employment in the area and drop out of the labor market. In Manchester, for example, a study of the later employment histories of a sample of workers on the payroll at the time of the shut-down of the Amoskeag Mills disclosed the fact that, among the married women in the group studied, 15 per cent of those regularly employed and 28 per cent of those intermittently employed at the time of the shut-down dropped out of the labor market during the following year. Other data also substantiate the view that large-scale displacement of workers causes some "forced" exits from as well as entrances to the labor market ("additional" workers). See Daniel Creamer, Labor and the Shut-down of the Amoskeag Textile Mills, Work Projects Administration National Research Project, Report #L-5, Philadelphia 1939, p. 93.

[9] This analysis was made on the basis of specific industries rather than broad industry groups. In Manchester there were 91 and in Millville 85 industry code-items in which one or more workers were reported as customarily employed.

are affected by the customary employment of secondary workers in the same industry as the head, but this relationship, as between labor markets, is conditioned by the diversification of employment opportunity in the community and the rate of unemployment in the community's major industries. In Philadelphia and Millville, the two diversified manufacturing centers with higher rates of general employment, a relatively high rate of customary employment in the same industry is associated with complete full-time employment in the household. In Manchester, on the other hand, it is associated with complete unemployment in the household. (Table 7.)

Conclusions

The conclusions reached in this study substantiate the findings of earlier studies of the Philadelphia labor market and of surveys in other cities to the effect that the incidence of employment and unemployment in households is not random. The nature of the data does not permit of proof or disproof of Woytinsky's explanation of this phenomenon in terms of the entrance of "additional" workers to the labor market, although there is no denial of the existence of such a group in the labor supply of each of the three cities studied. The evidence does support the view of Humphrey that the characteristics of secondary workers are an important factor, but implies that the significance of this may be in the distribution of secondary workers in households rather than in a comparison of secondary workers with primary workers, as groups.

The evidence of this study further suggests that the important factors in the incidence of unemployment among individuals, namely sex, age, race, and usual industry are not randomly distributed in multi-worker households, and that this may be at least a partial explanation of the patterns of employment and unemployment in such households. In addition, other factors,

which are not statistically measurable but are known to affect the employment prospects of individuals, may be shared in common by household members in the labor force. Such traits as physical appearance and personality, as well as community and employer contacts, when shared in common, may affect household employment patterns. Families or households, as well as individuals, may therefore be said to have employment characteristics which affect their employment status as units.

Viewed from another angle, the evidence suggests that the basic structure of the labor supply in a community can and should be observed at the family or household level as well as at the individual worker level. This is particularly true of labor markets with a high proportion of multi-worker households. In other words, one of the characteristics of a labor market which has received little attention to date is the degree of participation of family members in the labor market and the extent to which worker-members in households are customarily employed in the same or different industries or are concentrated in the most employable age- and sex-groups.

It follows from the fact that the risks of unemployment are not evenly distributed in multi-worker households that a high proportion of such households in a labor market will not necessarily spread the risks of general unemployment. In a highly specialized manufacturing center such as Manchester, a large-scale shut-down will result not only in a large volume of worker-unemployment but will also give rise to a large volume of complete unemployment in households, regardless of the number of workers per household. On the other hand, in a diversified manufacturing community the volume of unemployment is more widely distributed. In Philadelphia and Millville, for example, the vast majority of the unemployed workers are found in households

where their unemployment is offset by the continued employment of other household members. Nevertheless, even in these diversified manufacturing centers, there is a greater concentration of households reporting all workers unemployed than would be expected from a chance distribution of the unemployed among multi-worker households. When there is a high volume of employment in a diversified center and when, in addition, customary employment in the same industry is characteristic of households, as in Millville, a very high proportion of households will report all workers employed full-time.

The presence of a high proportion of multi-worker households in a labor market and the patterns of family participation in the labor market in relation to the diversification of employment opportunity have significance for the analysis of many types of labor market problems. An understanding of the concentration or distribution of unemployment in households is important to an analysis of the adequacy of unemployment compensation benefits as a "first line of defense" against unemployment and the planning of relief programs. Conversely, an understanding of the concentration or distribution of full-time employment in households is important to an analysis of the impact of the war production program on different types of labor markets. Patterns of family participation in the labor market have significance also in relation to problems of recruiting additional workers in communities faced with labor stringencies.

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